

REMARKS

Claims 1-20 are pending in this application. The Office Action rejects claims 7, 9-11, 18 and 19 under 35 U.S.C. § 103(a). Applicants amend claim 7 and add new claim 20. No new matter has been added.

**I. Rejection over Lee in view of Sambucetti et al**

Claims 7, 9, 18 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee (U.S. Patent No. 6,180,523) in view of Sambucetti et al (U.S. Patent No. 6,335,104). The Office Action asserts that Lee discloses each feature of instant claims 7, 9, 18 and 19, except for the first barrier layer, which is allegedly disclosed in Sambucetti et al. It thus allegedly would have been obvious to have used Sambucetti et al's diffusion prevention film in Lee in order to prevent the first Cu layer from diffusing, since Sambucetti et al discloses a film suitable for preventing Cu from diffusion. Applicants respectfully traverse the rejection.

Instant claim 7, from which all remaining pending claims depend, is directed toward a USLI having a *multilayered wiring structure*. As such, a diffusion prevention layer must be formed around the wiring which is buried within the first insulating layer. Such a diffusion prevention layer aids in preventing metal elements of the wiring layer from being diffused into the first insulating layer, and serves to form a wiring structure. This feature is nowhere disclosed in the combination of Lee and Sambucetti et al.

In contrast, as the Examiner admits, Lee nowhere teaches or suggest the first barrier layer being made of a plating film selected from the claimed components. Further, Sambucetti et al merely discloses a flat Cu pad having a barrier layer. Sambucetti et al's simple copper pad is configured in one plane, and thus also faces simpler technical problems than the instantly claimed multilayered structure. Certainly Sambucetti nowhere requires the formation of a barrier

layer (that serves as a wiring structure), formed *around* a wiring layer, that is buried within in the first insulating layer.

Thus, at least because Sambucetti does not suggest the features of instant claim 7, 9, 18 and 19 (i.e., formation of a diffusion prevention layer that forms the wiring structure), it would not have been obvious to have combined Sambucetti with Lee to arrive at the features of those claims. Additionally, having combined Lee and Sambucetti would not have rendered obvious any of claims 7, 9, 18 and 19.

Reconsideration and withdrawal of the rejection is earnestly solicited.

## **II. Other Art Rejections**

The Office Action rejects claims 9-11 under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Sambucetti et al, further in view of Neary (U.S. Patent No. 4,424,805) and Vullaume et al (Applied Physics Letters, vol. 69, pages 1646-48, 1996), as described by Wada et al (U.S. Patent Appln. Pub. No. 2005/0056828); and rejects claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Sambucetti et al, further in view of Silwa (U.S. Patent No. 4,990,462). Applicants respectfully traverse these rejections.

The foregoing rejections rely upon the improper rejection of instant claims 7, 9, 18 and 19 over the combination of Lee and Sambucetti et al. For the reasons discussed above, these rejections are thus moot. Further, none of Neary, Vallaume et al or Silwa remedy the deficiencies of the combination of Lee and Sambucetti et al.

For at least the foregoing reasons, none of instant claims 9-11 or 18 would have been rendered obvious over any combination of the foregoing cited references. Reconsideration and withdrawal of the rejection are earnestly solicited.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. Appl. No. 10/694,172 (Q78176)**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The U.S. Patent and Trademark Office is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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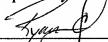
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CUSTOMER NUMBER

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Respectfully submitted,

  
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